

Photonics as a Sustainable technology and the Innovation Perspectives Offered by  
PhotonHub and ACTPHAST4R for Researchers and Enterprises

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Photonics is the research discipline that innovates with the unique properties of light. Touted as one of the eight key digital technologies of the 21<sup>st</sup> century it is enabling sustainable and energy-friendly applications such as solar energy, optical data communication, laser-based manufacturing, LED-based lighting, and medical imaging. In the first part of this presentation, I will illustrate how photonics research can contribute to tackling the global challenges that humanity is facing, such as fighting cancer, cleaning oceans, creating climate neutral smart cities, providing safe food from farm to fork, and adapting to climate change. In the second part of my presentation, I will introduce efficient mechanisms to transfer these research findings and technological developments to industry and to accelerate their uptake by researchers and companies. I will also explain how we have created unique full-service one-stop-shops to provide both researchers (ACTPHAST4R) and companies (PhotonHub Europe) with access to some of the best photonics experts and highly advanced photonics technology supply chains to facilitate the uptake of this sustainable and durable technology.